

Everglades Cleanup Progress Impressive

Newest STA performs better than expected



As an example of continuous efforts to improve and speed Everglades cleanup, approximately 50,000 pounds of native vegetation were harvested from STA-2 and transported last August by helicopter into STA-3/4. The plants survived intact after Hurricanes Frances and Jeanne.

A full decade has passed since the Everglades Forever Act became law, requiring the state of Florida to address water quality problems in water flowing into the Everglades, on a scale never before attempted. The South Florida Water Management District is the lead agency responsible for carrying out the cleanup effort.

Progress has been impressive. The District has constructed five treatment wetlands, with a sixth being completed by the U.S. Army Corps of Engineers. These wetlands, called stormwater treatment areas (or STAs), cover more than 41,000 acres along the northern border of the Everglades. STAs harness the cleansing power of plants and algae to efficiently remove phosphorus from stormwater runoff plus water releases from Lake Okeechobee. Although phosphorus is a beneficial component in fertilizer, it is a pollutant to the Everglades ecosystem. To date, the STAs have removed more than 550 tons of phosphorus from Everglades-bound waters.

STA-3/4 EXCEEDS EXPECTATIONS

Results have already shown that the newest and largest of these wetlands, STA-3/4 in central Palm Beach County, is producing excellent water quality. In August 2004, less than a year after opening, all four monitoring sites at STA-3/4 exhibited weekly outflow concentrations of 10 parts per billion (ppb) – the target for completion of the entire cleanup effort.

“Achieving these low values so soon is outstanding and extremely promising,” said District Executive Director Henry Dean.

To reach the target of 10 ppb for all waters entering the Everglades, the Everglades Forever Act requires, by 2006, implementation of the best available phosphorus-reduction technologies. In 2003, the District developed a technical plan containing additional water quality improvement strategies. This

plan was granted legislative approval and is now being implemented.

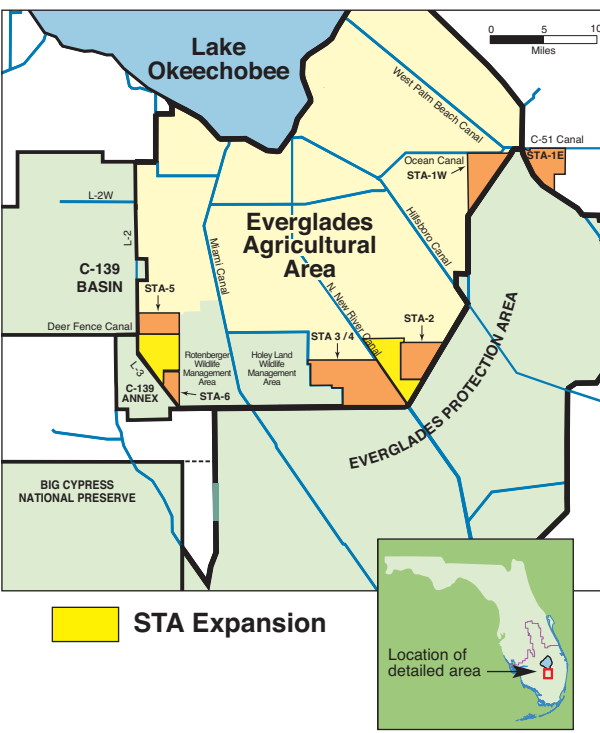
The key features of the plan are structural enhancements, vegetation modifications and operational improvements in all the STAs – many of which were started 1-2 years ahead of schedule. In September and October 2004, the District’s Governing Board approved almost \$15 million in construction enhancements for STA-1W and STA-3/4. Also in October, the Governing Board approved expansion of the entire STA “footprint” by approximately 40 percent, thanks to the addition of 18,000 acres that will be converted to treatment wetlands, helping to bring phosphorus levels down to the required limits.

AGRICULTURAL, URBAN BMPS SURPASS LEGAL REQUIREMENTS IN CLEANUP EFFORT

Of course it also helps to put less phosphorus into the soil in the first place. That component of the cleanup effort is known as best management practices, or BMPs.

Best management practices are a variety of farming and landscaping techniques that minimize phosphorus inputs. Examples include the use of fertilizers with low phosphorus content, reducing soil erosion, modified timing of fertilizer applications, reuse of stormwater runoff for irrigation and improved management of animal waste. BMPs are put to use in both urban and rural settings – from golf courses, town parks and housing developments to sugarcane fields, horse stables and dairy farms.

The use of best management practices has made a significant contribution to the cleanup effort. Since implementation in the Everglades Agricultural Area south of Lake Okeechobee, they have prevented more than 1,300 tons of phosphorus from reaching Everglades waters. This past year was an especially exceptional one. Without BMPs, an estimated 229 metric tons of phosphorus would have left the Everglades Agricultural Area in stormwater runoff between May 1, 2003, and April 30, 2004. But only 82 metric tons actually did (with an average concentration of 69 ppb). For the ninth consecutive year, BMPs have progressively lowered phosphorus inputs, surpassing the requirement in the Everglades Forever Act of 25-percent improvement each year. This past year saw a 64-percent reduction!



WORK STILL TO BE DONE

An area that currently needs improvement is the large C-139 basin, located west of the Everglades Agricultural Area. Phosphorus levels in water runoff there have been higher than desired, and water managers are working with landowners to increase their use of BMPs. District-sponsored demonstration projects and educational programs are used to promote the benefits of participation in this highly effective effort, and more frequent on-site inspections will help to ensure compliance.

As part of the entire STA expansion effort, new treatment wetlands will be constructed between the existing STA-5 and STA-6. This new treatment area will be devoted almost exclusively to reducing phosphorus from the C-139 basin runoff. Phase one of construction (covering 2,560 acres) is part of the District’s effort to accelerate eight essential projects for Everglades restoration, known as Acceler8.

Report Has a New Name, New Publish Date

South Florida Environmental Report available Feb. 15

The *South Florida Environmental Report*, formerly known as the *Everglades Consolidated Report*, is a newly expanded, two-volume report that in addition to the Everglades now includes information on Lake Okeechobee, Kissimmee River and coastal ecosystems, as well as planning, financial and project status for annual reports required under various mandates. This report is the product of a major consolidation process authorized as a pilot project by the Florida Legislature in May 2004. *Volume I, The South Florida Environment – Water Year 2004*, provides data summaries and detailed analysis for all major ecosystems in South Florida to support District-wide restoration, management, and protection activities. *Volume II, Annual Plans and Reports*, is a consolidation of eight annual reports into chapters that reference a project status report database, making project information more accessible.

This premiere edition will be available Feb. 15 online at www.sfwmd.gov or by calling (561) 682-6076. Highlights and major findings covered in the report will be featured in the March/April issue of *WaterMatters*.

OTHER EVERGLADES PROGRESS

Acceler8 continues in “dual track” mode: The eight Acceler8 projects will continue to run on a “dual track” with the District and the U.S. Army Corps of Engineers continuing in the planning phases for these and all of the Comprehensive Everglades Restoration Plan projects, while the District will proceed with the more detailed design and construction of the Acceler8 projects. In fiscal year 2005, the 30 percent design for the three large reservoir projects will continue to move forward and the Picayune Strand Restoration Project Implementation Report will be published in the Federal Register, which should lead to Congressional authorization of the project. For more information about Acceler8, visit www.evergladesnow.org

Western C-11 Water Quality Improvement Project nears completion: The C-11 “stand-alone” project in Broward County is in its final phase. When completed, it will immediately reduce pollutants to the Everglades. Project components include the construction of a four-bay pump station (S-9A) and an Obermeyer Gated Spillway system (S-381), a first of its kind in South Florida. The system’s steel gates are supported by inflatable air bladders that maintain canal elevation. The structure is manatee-friendly as water flows over the top of the gates, thus allowing these gentle giants to move freely in the flow without risk of injury.